

REMARKS

Claim 11 was objected to because of an alleged “informality”. According to the Official Action, the phrase “said fluorescence dye” should be “said fluorescent polymer” in order to correspond to Claims 1-10, 12 and 13. This rejection is respectfully traversed. Claim 8, from which Claim 11 depends, recites “a fluorescent dye”. Accordingly, the phrase “said fluorescence dye” in Claim 11 has proper antecedent basis. Reconsideration and withdrawal of this objection is therefore respectfully requested.

Claim 13 was also objected to because of an alleged “informality” (*i.e.*, the absence of a comma after the phrase “porous beads”). Accordingly, Claim 13 has been amended to insert a comma after the phrase “porous beads”. Reconsideration and withdrawal of this objection is therefore respectfully requested.

Claims 1-13 were rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection, which appears on pages 3-4, numbered paragraphs 4-7 of the Official Action, is respectfully traversed.

According to the Official Action, it is unclear from the wording of Claim 1 what is complexed together to form the recited “complex”. Claim 1 has been amended to clarify the claimed subject matter. It is respectfully submitted that the amendments to Claim 1 obviate the rejection of this claim. Please note that the amendments to Claim 1 do not change the scope of this claim.

Claim 3 recites “said sequence of peptide nucleic acids”. According to the Official Action, there is insufficient antecedent basis for this phrase in the claim. As suggested in the Official Action, Claim 3 has been amended to depend from Claim 2. It is respectfully submitted that this amendment obviates the rejection of Claim 3.

The remaining claims were presumably rejected based on their dependency from Claim 1. Accordingly, the amendment to Claim 1 has obviated the rejection of these claims. In view of the above, reconsideration and withdrawal of the rejection of Claims 1-13 under 35 U.S.C. §112 are respectfully requested.

Claims 1-7, 12 and 13 were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,355,421 issued to Coull et al. (hereinafter referred to as “Coull”). This rejection, which appears on pages 4-5, numbered paragraph 9 of the Official Action, is respectfully traversed.

According to the Official Action, this rejection is based on the allegation that the left arm segment labeled with a fluorophore as shown in Figure 11 of Coull is a “fluorescent polymer” as recited in Claim 1. Claim 1, however, recites a fluorescent polymer comprising a plurality of fluorescers and a property altering element, wherein the plurality of fluorescers of the fluorescent polymer are associated with one another such that the formation of a complex between the property altering element and the fluorescent polymer results in amplified superquenching of the fluorescence emitted by the fluorescent polymer. The Official Action has pointed to no teaching or suggestion in Coull of a chemical moiety as set forth in Claim 1 comprising a fluorescent polymer and a property altering element as set forth above. Therefore, it is respectfully submitted that Claim 1 is not anticipated or rendered unpatentable by Coull.

Claims 2-7, 12 and 13 depend either directly or indirectly from Claim 1 and are therefore also patentable over Coull for at least the reasons set forth above with respect to Claim 1. Accordingly, reconsideration and withdrawal of the rejection of Claims 1-7, 12 and 13 are respectfully requested.

Claims 1-7, 12, and 13 were also rejected under 35 U.S.C. §102(e) as allegedly being anticipated by Coull. This rejection, which appears on pages 6-8, numbered paragraph 10 of the

Official Action, is respectfully traversed.

According to the Official Action, this rejection is based on the allegation that the fluorophore that labels the left arm segment in Figure 11 of Coull is a “fluorescent polymer”. According to the Official Action, Coull discloses that the left arm segment can be labeled with a fluorophore such as Cy3 and that Cy3, which has “five -CH₂-”, is a “fluorescent polymer”. The Official Action refers to the chemical structure of a Cy3 NHS ester which has a -(CH₂)₅- linkage. As set forth above, Claim 1 recites a fluorescent polymer comprising *a plurality of fluorescers* associated with one another such that the formation of a complex between the property altering element and the fluorescent polymer results in amplified superquenching of the fluorescence emitted by the fluorescent polymer. The Official Action has pointed to no teaching or suggestion in Coull of a chemical moiety as set forth in Claim 1 comprising a fluorescent polymer and a property altering element as set forth above. In fact, Cy3 comprises a single fluorescer. Therefore, the Cy3 label disclosed in Coull is not a “fluorescent polymer” as recited in Claim 1. Furthermore, quenching of the fluorescence emitted by the Cy3 label would not be “amplified superquenching” as set forth in Claim 1.

Claims 2-7, 12 and 13 depend either directly or indirectly from Claim 1 and are therefore also patentable over Coull for at least the reasons set forth above with respect to Claim 1. Accordingly, reconsideration and withdrawal of the rejection of Claims 1-7, 12 and 13 are respectfully requested.

Claims 8-11 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Coull in view of Chen et al., PNAS, 96, pp. 12287-12292, October 26, 1999 (hereinafter referred to as “Chen”). This rejection, which appears on pages 9-10, numbered paragraph 12 of the Official Action, is respectfully traversed.

Claim 8 depends from Claim 1 and recites that the “. . . fluorescent polymer comprises repeat units each containing a fluorescent dye pendant on a backbone moiety”. As acknowledged in the Official Action, Coull fails to disclose a fluorescent polymer comprising repeat units each containing a fluorescent dye pendant on a backbone moiety. In order to remedy this acknowledged deficiency of Coull, the Official Action relies upon Chen which, according to the Official Action, discloses a fluorescent polymer designated as MPS-PPV in Chen comprising “. . . repeat units each containing a fluorescent dye pendant on a backbone moiety as recited in claim 8. . .” (Pg. 9 of the Official Action). Contrary to this assertion in the Official Action, however, the MPS-PPV polymer does not comprise repeat units each containing a fluorescent dye pendant on a backbone moiety. Rather, in the case of the MPS-PPV polymer, the fluorescent dye repeat unit is stilbene and each of the stilbene repeat units is within the backbone of the MPS-PPV polymer itself and not pendant to the backbone of the polymer (see pg. 12288 of Chen). Accordingly, the combination of Chen and Coull proposed in the Official Action does not teach or reasonably suggest a chemical moiety as set forth in Claim 8. In view of the above, reconsideration and withdrawal of the rejection of Claim 8 is respectfully requested.

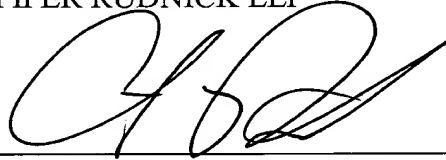
Claims 9-11 depend either directly or indirectly from Claim 8 and are therefore also patentable over Coull taken with Chen for at least the reasons set forth above with respect to Claim 8. Accordingly, reconsideration and withdrawal of the rejections of these claims are also respectfully requested.

CONCLUSION

All rejections having been addressed by the present amendments and response, Applicants believe that the present case is in condition for allowance and respectfully request early notice to that effect. If any issues remain to be addressed in this matter which might be resolved by discussion, the Examiner is respectfully requested to call Applicants' undersigned counsel at the number indicated below.

Respectfully submitted,

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